



**wieland**

# ***gesis***<sup>®</sup> KNX P CO

Presence detector (Art.-Nr. 83.020.1400.0)



## **User Manual**

Operating instructions

Dok.-Nr. BA000633

Stand: 10/2011 (Rev. A)



# Contents

<b>1</b>	<b>Functional characteristics.....</b>	<b>4</b>
1.1	Settings .....	4
1.2	Characteristics.....	4
1.3	Technical Data.....	4
<b>2</b>	<b>The Application Program 'gesis KNX P CO' .....</b>	<b>5</b>
2.1	Selection in the product database .....	5
2.2	Overview .....	5
2.3	Functions of the presence detector .....	5
2.4	Parameters .....	6
2.4.1	Settings .....	6
2.4.2	Outputs light A, B.....	6
2.4.3	Output presence.....	7
2.4.4	Output surveillance .....	8
2.4.5	Output brightness .....	8
2.4.6	Remote/Scenes .....	8
2.5	Communication objects .....	9
2.5.1	Object characteristics.....	9
2.6	Description of the communication objects.....	10
<b>3</b>	<b>Configuration of the actuators.....</b>	<b>12</b>
3.1	Recommended configuration .....	12
3.1.1	Actuators without a separate object for status acknowledgement (value) .....	12
3.1.2	Actuators with a separate object for status acknowledgement (value) .....	12
<b>4</b>	<b>Important information .....</b>	<b>13</b>
4.1	Parallel circuit operation.....	13
4.2	Normal or test operation .....	13
4.3	Push buttons .....	13
<b>5</b>	<b>Application Example.....</b>	<b>14</b>
5.1	Single room with two switched light groups.....	14
5.1.1	Necessary equipment .....	14
5.1.2	Realization .....	14
5.1.3	Important parameter settings .....	14
5.1.4	Assignment of objects .....	15

# 1 Functional characteristics

The switching behaviour of the presence detector is controlled by presence and light control operating modes. In the 'Switching' operation mode, the lightning switches on with darkness and presence and off with sufficient light or absence. In the 'constant light control' operating mode the sensor controls the artificial light daylight-dependent on a constant lighting level. It is possible to use the presence detector in fully automatic or semi automatic mode. In 'Fully automatic' mode the light switches on and off automatically according to presence and light. In 'Semi-automatic' mode the light must be switched on manually and switched off automatically.

The presence detector has a mixed light measurement and is suitable for controlling fluorescent lamps (FL/PL), halogen and glow lamps. With the object presence it is also possible to send a telegram for HVAC control. The switching behaviour is only controlled by presence.

Several detectors can be connected with each other (Master/Slave) to increase the detection area. The master controls lightning and HVAC. All other detectors merely provide presence information as slaves. Also it is possible to connect several detectors as master with each other (Master/Master). Every master controls its lighting group according to its own light measurements. Presence is detected by all the detectors. Master or

slave operating is selected via configuration. In the test operation mode it is possible to check the detection range and the configuration.

## 1.1 Settings

All settings are adjusted using ETS. ETS2 V1.2 or newer is required.

## 1.2 Characteristics

The presence detector detects persons present as a result of the slightest movements. At the same time its light sensor measures the brightness level in the room and compares it to the preset brightness value.

- Option of one or two outputs for light
- Switching or constant light control
- Output presence for control of HVAC
- Output surveillance with cyclical detector points
- Output brightness with cyclical output of brightness value in lux
- Parallel circuit operation master-slave, master-master for uninterrupted coverage of large areas
- Separate disabling function for light and presence
- Scene control with two scenes per lighting group
- User remote control clic (optional)

## 1.3 Technical Data

Voltage Supply		Bus voltage	
Permitted working temperature		0 °C bis +50 °C	
Protection rating		EN 60529: IP 40	
Recommended installation height		2.0 – 3.0 m	
Max. Range		6 × 6 m at a height of 2.5 m	
Detection range		8 × 8 m at a height of 3.5 m	
		360° horizontal, 120° vertical	
Detection area at height		Sitting Person (presence detector)	Person in action e.g. walking (movement detector)
2.0 m		3.0 × 3.0 m	4.5 × 4.5 m ± 0.5 m
2.5 m		4.0 × 4.0 m	6.0 × 6.0 m ± 0.5 m
3.0 m		4.5 × 4.5 m	7.0 × 7.0 m ± 1 m
3.5 m		–	8.0 × 8.0 m ± 1 m
Mixed light measurement		Approx. 10–1500 Lux, can be deactivated	
Light run-on time		30 sec to 120 min	
Light stand-by time		0 sec to 60 min	
Presence run-on time		30 sec to 120 min	
Presence switch on delay		0 sec to 30 min	
Assembly plate		70 × 70 mm	
Size of flush-mounted socket		Ø 55 mm (NIS, PMI)	
Dimmensions		102.5 × 102.5 × 33 mm (W × D × H)	

## 2 The Application Program 'gesis KNX P CO'

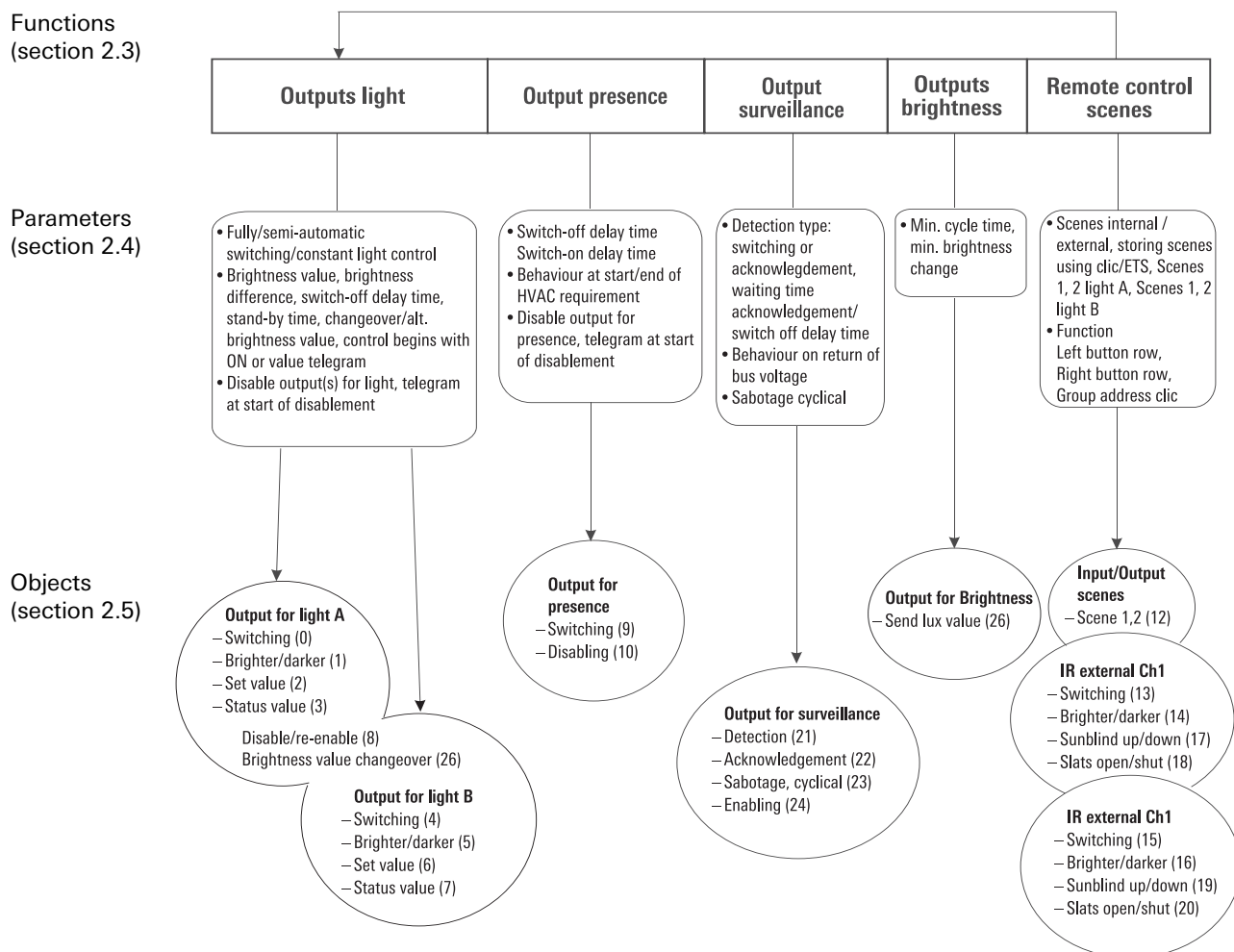
### 2.1 Selection in the product database

Manufacturer	Wieland Electric GmbH
Product family	Physical sensor
Product type	Presence detector
Program name	gesis KNX P CO

Download the application from: <http://www.wieland-electric.com/>

### 2.2 Overview

Structure of the compact office EIB application at the functions (outputs), parameter and object levels



### 2.3 Functions of the presence detector

Possible settings are set in *oblique*, the default setting being shown in **bold oblique**.

#### Operation mode

##### Master stand-alone

Presence detector operates as an autonomous unit.

##### Master in parallel

In order to expand the detection area, additional detectors are connected as slaves to a master in parallel circuit operation, or several masters in parallel circuit

operation are connected together as required (see Chapter 4, 'Important information').

##### Slave

slaves are used to expand the detection area. Their sole role is to supply presence information to the master.

# The Application Program 'gesis KNX P CO'

## NOTICE

Please also read the information on cycle time for parallel circuit operation in Section 4.1

### Outputs light (Section 3.3.1)

#### **Output light A active**

presence detector switches or controls one lighting group in accordance with the presence of persons and natural daylight.

#### *Outputs light A,B active*

The presence detector switches or controls two lighting groups in accordance with the presence of persons and natural daylight. A desired brightness value is defined for this purpose, the second lighting group is switched in or controlled with a difference in brightness.

#### *Inactive*

The presence detector is not used for controlling lighting.

### Output presence (Section 3.3.2)

#### **Output presence active**

Detector switches HVAC applications in accordance with the presence of persons or supplies presence information to superordinate systems. (irrespective of brightness).

#### *Inactive*

The presence detector is not used to control HVAC applications.

### Output Surveillance (Section 3.3.3)

#### *Output surveillance active*

The presence detector supplies a presence signal with reduced sensitivity for room surveillance.

#### *Inactive*

The presence detector is not used for room surveillance.

### Output brightness (Section 3.3.4)

#### *Output brightness active*

Presence detector sends the measured room brightness (ignoring the reflection factor).

#### *Inactive*

The presence detector is not used as a brightness sensor.

### Normal or test operation

#### **Normal operation**

The detector must be in normal mode for regular operation.

#### *Test mode*

The detector may be set to test mode for the purpose of checking the detection area and the linking of objects. The switch-off delay times are reduced to 10 sec. The detector switches irrespective of daylight. The detector restarts when switched to normal.

## 2.4 Parameters

Parameters are set in *oblique*, the default setting is shown in ***bold oblique***.

### 2.4.1 Settings

Name	Value	Meaning
Device type	gesis KNX P CO	fixed setting

### 2.4.2 Outputs light A, B

#### Switching or constant light control

##### **Switching (on/off)**

On detection of movement and inadequate brightness the output light sends an ON telegram. At the end of the switch-off delay time or in the case of adequate brightness, an OFF telegram is sent.

##### *Constant light control*

On detection of movement and inadequate brightness the output light controls the lighting to the predetermined desired brightness level and keeps it constant during fluctuations in daylight. At the end of the switch-off delay time, or in case of adequate brightness when the lighting has already been dimmed to the minimum level, the lighting is switched off. A second output for light can also be controlled with a different brightness.

## NOTICE

If two outputs for light A, B are active, both outputs will be in control or switching mode. A combination of control and switching mode is not possible.

### Fully or semi-automatic

#### **fully automatic**

In "Fully automatic" operation mode, the output light switches or controls the lighting automatically according to presence and ambient brightness. Switch off occurs automatically.

#### *semi-automatic*

In "Semi-automatic" operation mode, the lighting must always be switched on manually by push button or remote control. Switch off occurs automatically.

## NOTICE

Lighting can be switched on manually, at any time, in both operating modes even with adequate daylight. The lights stay on for at least 30 minutes if people are present in the room. After that, the sensor checks the light requirement based on the brightness level and turns off the light if there is sufficient brightness. The light goes off after a preset run-on time if the room is vacated. (See section 4.3, 'Push buttons').

- Switching (on/off): The sensor switches the lighting on.
- Constant light control: The sensor controls according to the set brightness level.

### Brightness value

The brightness value can be set between 1.0 and 8.0. The factory default value is 4.0, which corresponds to a brightness of approx. 400 lux, depending on the reflective properties of the room. (Guide values, dependent on the room: 2~100 lux, 3~200 lux, 4~400 lux, 5~800 lux, 6~1600 lux). In switching mode, the brightness value can be deactivated by means of the

setting "none, solely dependent on presence". The service remote control QuickSet aids in setting the brightness value, taking into account the reflection factor (see detector operating manual).

## Brightness difference

(This setting is only possible if two lighting groups are active)

The brightness difference adjusts the different light requirement of lighting group B in comparison to lighting group A:

- A positive value indicates a lower daylight level in the area of lighting group B (more artificial light needed).
- Synchronous indicates that both lighting groups are being switched or controlled uniformly.
- A negative value indicates a higher daylight level in the area of lighting group B (less artificial light needed).

**Example:** Two lighting groups are installed in an office with good natural light. Lighting group A is close to the windows, lighting group B is in the interior of the room. Sensible settings are +20% or +40%.

## Switch-off delay time

The switch-off delay time can be set between 30 sec. and 20 min. It adapts itself to user behaviour. It can increase itself automatically to a max. of 15 min. or reduce itself to the pre-set minimum time. If set to less than 2 min. or more than 15 min. the switch-off delay time does not change in a self-adaptive manner. The switch-off delay time applies equally to both outputs for light.

## Stand-by time

(This setting is only possible if constant light control is active)

In control mode, an activated stand-by time results in both lighting groups being dimmed to a minimum value at the end of the switch-off delay time. The stand-by time can be set between 0 sec. and 60 min.

With Stand-by ON, the lighting remains continuously on stand-by. If the room brightness rises above the desired value, the lighting switches off. If the room brightness falls below the desired value, the lighting switches automatically to stand-by, even if no one is present. In this way a minimum level of lighting is guaranteed even during the hours of darkness.

## Disabling outputs for light

The two outputs for light are both disabled with either an ON or an OFF telegram. At the start of the period of disablement the outputs for light can send one of the following final telegrams as desired: ON, OFF, or no telegram. All telegrams are suppressed for the duration of the disablement. The outputs for light are re-enabled by means of an ON or OFF telegram, complementary to the telegram at the time of disablement. When the period of disablement is cancelled the detector sends the current status or continues the constant light control.

The output for presence is unaffected by the disablement of the outputs for light. It has its own disabling function. The outputs for surveillance and brightness are unaffected by the disablement of the outputs for light.

## Brightness value changeover

When brightness value changeover is activated, it is possible to switch between two desired brightness values by means of a telegram in the current mode. An ON telegram to the object concerned switches to the alternative desired brightness value, an OFF telegram switches back to the original value. This applies both to switching and to constant light control. In this way it is possible to realise day and night modes with two different levels of brightness, for example.

## Behaviour at the start of control

(Only with activated constant light control )

Depending on the configuration of the switching/dimming actuator, the constant light control can be started with a value telegram or an ON telegram. Normally it is started with a value telegram, the lighting dims to the desired brightness value in the time set in the actuator.

If the control is started with an ON telegram, the actuator jumps (dims) to its predefined switch-on value and begins controlling from this value.

## NOTICE

Please read chapter 3, 'Configuration of the actuators'.

## 2.4.3 Output presence

The switching behaviour is only affected by presence. The output for presence functions irrespective of daylight.

In the case of presence, either an ON or OFF telegram or no telegram is sent. At the end of the switch-off delay time, either an ON or OFF telegram or no telegram is sent.

## Switch-off delay time

30 s ... **15 min** ... 120 min

The switch-off delay time for presence is restarted after every movement.

## Switch-on delay time

### inactive

Switch-on delay time is 0 s.

30 s to 30 min

The switch on delay time for presence can be set between 0 s and 30 min.

## Disabling the output for presence

Send 'ON' telegram

**Send 'OFF' telegram**

Send no telegram

The output for presence can be disabled with either an ON or OFF telegram. At the start of the period of disablement the output for presence can send one of the following final telegrams as desired: ON, OFF, or no



telegram. All telegrams are suppressed for the duration of the disablement. The output for presence is re-enabled by means of an ON or OFF telegram, complementary to the telegram at the time of disablement. When the period of disablement is cancelled the detector sends the current status.

The outputs for light, surveillance and brightness are unaffected by the disablement of the output for presence.

## 2.4.4 Output surveillance

The switching behaviour is only affected by presence and reliably detects the presence of persons. The output for surveillance functions irrespective of daylight.

### Report type

#### **Cyclic with confirmation**

On detecting movement, the output for surveillance sends an ON telegram. If it receives no confirmation, it repeats the ON telegram at regular intervals. (Waiting time for acknowledgement).

#### *Switching (on/off)*

On detecting movement, the output for surveillance sends an ON telegram; at the end of the switch-off delay time for surveillance, an OFF telegram. The OFF telegram can optionally be suppressed.

### Behaviour on return of bus voltage

#### **Output for surveillance disabled**

#### *Output for surveillance enabled*

The behaviour on return of bus voltage defines whether the output for surveillance is to be enabled or disabled during a restart following a loss of bus voltage.

### Sabotage, cyclical

#### *30 s ... 30 min*

The cyclical detection point sends OFF telegrams at regular intervals in order to indicate unauthorised removal of the detector or a bus interruption.

### NOTICE

Trigger telegrams from the master-slave parallel circuit operation do not trigger the output for surveillance.

## 2.4.5 Output brightness

#### *30 s to 30 min*

#### *0 % to 50 %*

The brightness value object gives the room brightness (measured value without taking a reflection factor into account) as a 2-byte value in lux in accordance with EIS5.

The maximum time interval between two telegrams can be set between 30 s and 30 min. The minimum time interval is 15 s.

The minimum brightness change before a telegram is sent can be set between 10 % and 90 %.

### NOTICE

The lux value provided by the output for brightness is not suitable for an external control. The constant light control from the outputs for light should be used for this purpose.

## 2.4.6 Remote/Scenes

### Scenes

#### **Internal scenes**

The value to which each lighting group will dim on choice of scene 1 or scene 2 can be determined separately.

In addition, the scenes can be called up by means of the user remote control clic (optional). The scenes can be saved via the ETS or with the clic.

#### *External scenes*

It is possible to control an external scene component in place of the internal scene component. The remote control clic (optional) is required for this purpose. Pressing on scene button 1 on the clic sends an OFF telegram, pressing on scene button 2 sends an ON telegram.

### Save scenes with

#### **ETS**

With ETS the user can specify the dimming values for scene 1 and scene 2, respectively.

#### *Remote control*

Light scenes are set via button or remote control (optional), and stored by pressing the button longer.

### Output value scene 1, lighting group A/B

#### **OFF**

The scene 1 output value does not affect the respective channel.

#### *ON*

The lighting group will be dimmed to the preset lighting value upon transmitting the information for scene 1.

### Output value scene 2, lighting group A/B

#### **OFF**

The scene 2 output value does not affect the respective channel.

#### *ON*

The lighting group will be dimmed to the preset lighting value upon transmitting the information for scene 2.

### User remote control clic (optional)

#### **Switching/dimming internal**

Pressing longer on the left-hand row of ▲/▼ buttons on the clic switches the output for light A on or off. Briefly button pressure dims the lighting while the button is depressed. If both outputs for light A,B are active, the right-hand row of ▲/▼ buttons controls output for light B in like manner.

#### *Switching/dimming external*

Pressing briefly on the relevant row of ▲/▼ buttons Switching/dimming ext. on the clic switches an external



# The Application Program 'gesis KNX P CO'

consumer on or off (channel 1 or 2). Longer button pressure dims the external consumer while the button is depressed.

## Sun blind external

Pressing briefly on the relevant row of ▲/▼ buttons of the clic raises or lowers a sunblind. Longer button pressure opens or closes the slats.

No function

## Group address remote control clic

**A + B**

A

B

C+D

C

D

E

The choice of group address (position of the channel selector switch on the remote control clic) allows adjacent detectors that are controlled with the user remote control clic to be separated from one another. For further information, please also see the operating manual for the user remote control clic.

## 2.5 Communication objects

### 2.5.1 Object characteristics

The presence detector has 27 communication objects.

Table 1: Communication flags

Flag	Name
C	Communication
R	Read
W	Write
T	Transmit

Table 2: Objects and flags

Nr.	Object name	Function	Type	Flags			
				C	R	W	T
0	Output light A	Switching	1 Bit	✓		✓	✓
1	Output light A	Brighter / darker	4 Bit	✓		✓	✓
2	Output light A	Set value	1 Byte	✓		✓	✓
3	Output light A	Status value	1 Byte	✓		✓	✓
4	Output light B	Switching	1 Bit	✓		✓	✓
5	Output light B	Brighter / darker	4 Bit	✓		✓	✓
6	Output light B	Set value	1 Byte	✓		✓	✓
7	Output light B	Status value	1 Byte	✓		✓	✓
8	Outputs light A, B	Disable / enable	1 Bit	✓		✓	✓
9	Output presence	Switching	1 Bit	✓			✓
10	Output presence	Disable / enable	1 Bit	✓		✓	
11	Parallel circuit operation	Trigger input / output	1 Bit	✓		✓	✓
12	Input / output scene	Scene 1 / 2	1 Bit	✓		✓	✓
13	IR extern channel 1	switching	1Bit	✓			✓
14	IR extern channel 1	Brighter / darker	4 Bit	✓			✓
15	IR extern channel 2	switching	1Bit	✓			✓
16	IR extern channel 2	Brighter / darker	4 Bit	✓			✓
17	IR extern channel 1	Sunblind up / down	1 Bit	✓			✓
18	IR extern channel 1	Slats open / shut	1 Bit	✓			✓
19	IR extern channel 2	Sunblind up / down	1 Bit	✓			✓
20	IR extern channel 2	Slats open / shut	1 Bit	✓			✓
21	Output surveillance	Report		✓			✓
22	Output surveillance	Confirmation		✓		✓	
23	Output surveillance	Sabotage cycl.		✓			✓
24	Output surveillance	Enable		✓		✓	

Nr.	Object name	Function	Type	Flags			
				C	R	W	T
25	Output brightness	Sending Lux value		✓			✓
26	Outputs light A, B	Brightness value changeover	1 Bit	✓		✓	

Number of communication flags	27
Number of group addresses	90
Number of allocations	90

## 2.6 Description of the communication objects

### Object 0, 'Output light A': Switching

On detection of movement and inadequate brightness each output light sends an ON telegram. At the end of the switch-off delay time or in case of adequate brightness, an OFF telegram is sent.

### Object 1, 'Output light A': Brighter / darker

On detection of movement and inadequate brightness each output light begins to send value telegrams (control begins with a value telegram) or an ON telegram (control begins with an ON telegram). At the end of the switch-off-delay time or in case of adequate brightness an off telegram is sent.

### Object 2, 'Output Light A': Set value

On detection of movement and inadequate brightness each output light begins to send value telegrams (control begins with a value telegram). The lightning start with a defined value for the brightness. At the end of the switch-off-delay time or in case of adequate brightness, an OFF telegram is sent

### Object 3, 'Output light A': Status value

The presence detector sends the status value cyclically.

### Object 4, 'Output light B': Switching

### Object 5, 'Output light B': Brighter / darker

### Object 6, 'Output light B': Set value

### Object 7, 'Output light B': Status value

Explanations of objects 1–6 apply identically to objects 4–7 for output 'B'.

### Object 8, 'Enable outputs light A, B: Disable / Enable

The two outputs for light are both disabled with an ON or OFF telegram. At the start of the period of disablement, the outputs for light are re-enabled by means of an ON or OFF telegram, complementary to the telegram at the time of disablement. When the period of disablement is cancelled the detector always sends the current status or continues the constant light control.

### Object 9, 'Output Presence': Switching

In the case of presence, the output for presence sends an ON or OFF telegram or no telegram (independent of daylight). At the end of the switch-off delay time, an ON or OFF telegram, or no telegram is sent.

### Object 10, 'Output Presence': Disable / Enable

The output for presence is disabled by means of an ON or OFF telegram. At the start of the period of disablement, the output for presence can optionally send one of the following final telegrams: ON, OFF, or no telegram. The output presence is re-enabled by means of an ON or OFF telegram, complementary to the

telegramat time of disablement. On re-enabling, the detector sends its current status.

### Object 11, 'Parallel circuit operation': Trigger input / output

(Master in parallel circuit operation or slave only)

The trigger input / output is required for parallel circuit operation of multiple presence detcors. Each detector send a maximum of two ON telegrams a minute as trigger signals which are evaluated by the masters. The interval between two telegrams can be set to a maximum of four minutes.

#### NOTICE

The interval between two trigger telegrams must always be set to a smaller value than the switchoff delay times!

### Object 12, 'Input / output scene': Scene 1 / 2

Internal scene:

An OFF telegram to the scene output object calls up scene 1, an ON telegram calls up scene 2.

Control of the scene component:

Pressing scene button 1 on the user remote control clic send an OFF telegram to the scene output object, pressing scene button 2 sends an ON telegram

### Object 13, 'IR ext. channel 1': switching

### Object 14, 'IR ext. channel 1': brighter / darker

### Object 15, 'IR ext. channel 2': switching

### Object 16, 'IR ext. channel 2': brighter / darker

Switching / dimming external:

Pressing the ▲/▼ buttons briefly causes an ON or OFF telegram to be sent via the object 'switching'. Sustained pressure on the ▲ button calls for the light intensity to be increased releasing the button stops this process. Sustained pressure on the ▼ button calls for the light intensity to be decreased releasing the button stops this process. Channels 1 and 2 of the remote control must each be set separately.

The optimal user remote control clic is required for this procedure.

**Object 17, 'IR ext. channel 1': sunblind up / down**

**Object 18, 'IR ext. channel 1': slats open / shut**

**Object 19, 'IR ext. channel 2': sunblind up / down**

**Object 20, 'IR ext. channel 2': slats open / shut**

Sunblind external:

Pressing the ▲/▼ buttons briefly causes an ON or OFF telegram to be sent via the object 'slats open / shut'. Sustained pressure on the ▲/▼ buttons causes an ON or OFF telegram to be sent via the object 'sunblind up/down'. Channels 1 and 2 of the remote control must each be set separately.

The optimal user remote control clic is required for this procedure.

**Object 21, 'Output surveillance': report**

**Object 22, 'Output surveillance': confirmation**

Cyclical with confirmation:

On detecting movement, the output for surveillance sends an ON telegram. If the detector receives no acknowledgement to the telegram within the predefined waiting time, it repeats the ON telegram. This process is repeated until an ON or OFF telegram is received at the object confirmation.

Switching (on/off):

On detecting movement, the output for surveillance sends an ON telegram. And at the end of the switch-off delay time for surveillance an OFF telegram.

**Object 23, 'Output surveillance': Sabotage cycl.**

In order to identify removal of the detector, the object 'sabotage cyclical' sends OFF telegrams at regular intervals whenever the detector is in operation.

**Object 24, 'Output surveillance': Enable**

In both detection types the output for surveillance can be enabled or disabled during operation with an ON telegram or an OFF telegram respectively.

**Object 25, 'Output brightness': sending lux value**

The output for brightness sends the current brightness value in the form of an EIS5 telegram without allowance for a reflection factor. The telegram frequency depends on the maximum cycle time and the minimum brightness change

**Object 26, 'Output lights A, B': Brightness value  
changeover**

An ON telegram switches to the alternative brightness value an OFF telegram uses the original brightness value as desired value.

### 3 Configuration of the actuators

#### 3.1 Recommended configuration

Duration for the dimming process 0 – 100 %	10 seconds
Immediate or progressive dimming	Progressive
Adopt dimming values immediately	Immediately
Switching off by dimming possible	No
Switching on by dimming possible	Yes
Lower dimming limit	Minimum (0 %)
Upper dimming limit	Maximum (100 %)
Switch-off behaviour (switch off or dim to off)	Switch off
Brightness level at switch on (optional)	50 %
Send status value of dimming value	Only by means of reading request

#### NOTICE

The parameter designations may differ according to the dimming actuator or switching/dimming actuator model.

It is unnecessary for automatic status messages to be generated by the actuator. The detector collects this information itself.

##### 3.1.1 Actuators without a separate object for status acknowledgement (value)

Group address dimming actuator

Parameter	Group address	Flag			
		C	R	W	T
6 ON / OFF	10 / 0 / 1	x		x	Default
9 Dimming	10 / 0 / 2	x		x	Default
12 Set value	10 / 0 / 7 <sup>1)</sup> 10 / 0 / 3	x	x <sup>2)</sup>	x	Default

<sup>1)</sup> set sending

<sup>2)</sup> with certain actuators, the read flag must be set manually

Group address presence detector

Parameter	Group address
0 ON / OFF	10 / 0 / 1
1 Brighter / Darker	10 / 0 / 2
2 Set value	10 / 0 / 3
12 Status Value	10 / 0 / 7

#### NOTICE

If several actuators are connected to a single detector light output, care should be taken to ensure identical parameterisation of the actuators.

**Exception:** The read flag may only be set for one of the actuators for each lighting group.

#### 3.1.2 Actuators with a separate object for status acknowledgement (value)

Group address dimming actuator

Parameter	Group address	Flag			
		C	R	W	T
6 ON / OFF	10 / 0 / 1	x		x	Default
9 Dimming	10 / 0 / 2	x		x	Default
12 Set value	10 / 0 / 3	x	x	x	Default
18 Status (value)	10 / 0 / 7	x	x		Default

Group address presence detector

Parameter	Group address
0 ON / OFF	10 / 0 / 1
1 Brighter / Darker	10 / 0 / 2
2 Set value	10 / 0 / 3
12 Status Value	10 / 0 / 7

#### NOTICE

If several actuators are connected to a single detector light output, care should be taken to ensure identical parameterisation of the actuators.

**Exception:** The status value object may only be linked with one of the actuators for each lighting group.

## 4 Important information

### 4.1 Parallel circuit operation

For larger rooms, multiple detectors can be connected in parallel. In this way their combined presence detection area is increased.

One "master" can be connected in parallel with several "slaves". This is accomplished by interconnecting the trigger inputs and outputs. The slaves only supply the presence information from their own detection area. Brightness measurement and management of all parameter settings is done by the master.

Parallel connection of multiple masters is also possible. In this case the presence detection is done jointly whereas the light measurement, parameter settings and lighting control are individually processed by each master. This offers multiple outputs for light with individual brightness measurement but a common presence detection.

#### NOTICE

In parallel circuit operation, each master in parallel circuit operation and each slave sends two telegrams per minute for as long as someone is present in the detection area. The interval between two telegrams can be extended up to four minutes.

The function of the outputs for presence, surveillance and brightness remain unaffected.

#### NOTICE

A discrete KNX push button with discrete group address for every lighting channel has to be used for manual override of two lighting groups A, B.

### 4.2 Normal or test operation

The test mode enables the presence detection function to be checked. It can be selected via the ETS or also using the service remote control QuickSet plus. When selected with the QuickSet plus, the test mode ends automatically after 10 min. Please refer to the notes concerning the test mode in the operating manual for the detector.

### 4.3 Push buttons

The detector responds to telegrams sent directly to the actuators by push buttons or superordinate functions:

**Switching (On/Off):** If the detector receives an ON telegram intended for the switching actuator, the lighting remains switched on for 30 minutes in the case of presence. At the end of the 30 minutes, the light measurement is reactivated. If the brightness is adequate, an OFF telegram is sent.

**Constant light control:** If the detector receives an ON telegram intended for the actuator, the constant light control is active. If the detector receives a value or dimming telegram intended for the actuator, control is suspended for the duration of the presence. Once the room becomes unoccupied and the switch-off delay time has expired, the detector returns to control mode.

**In both cases:** If the detector receives an OFF telegram intended for the actuator, it remains switched off for the duration of presence. Once the room becomes unoccupied and the switch-off delay time has expired, the detector returns to switching or control mode.

## 5 Application Example

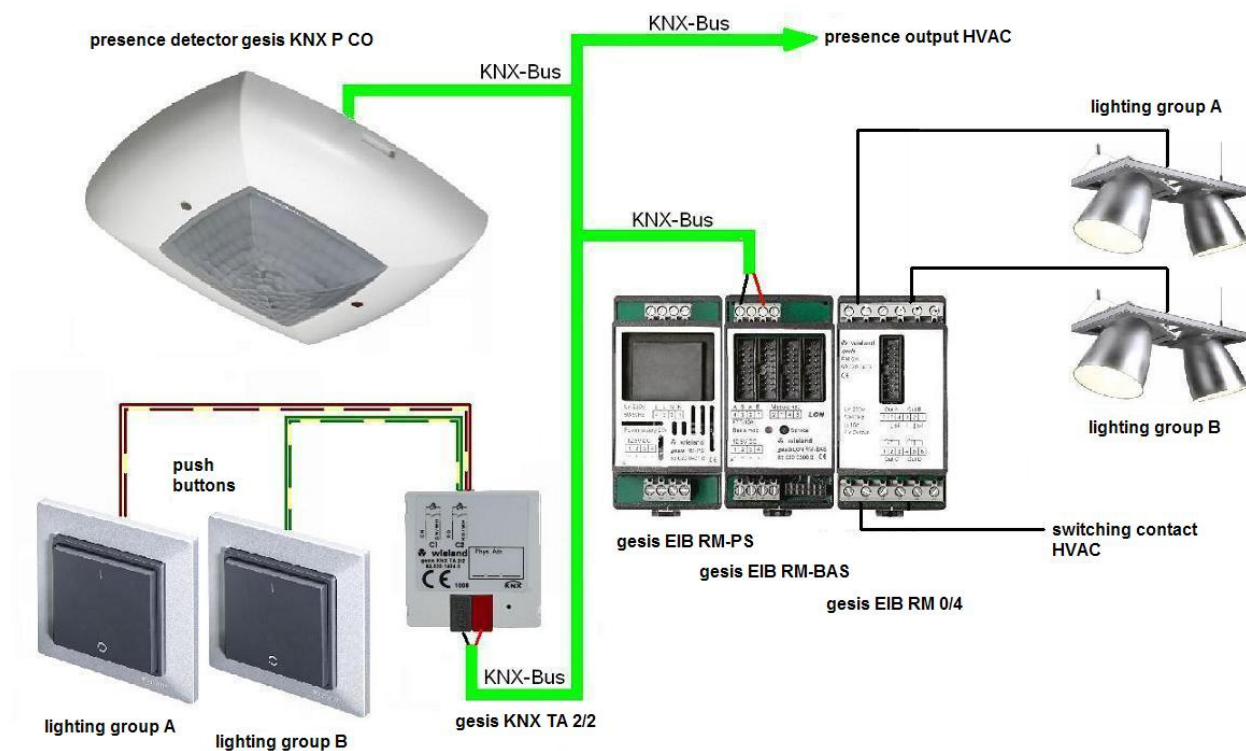
### 5.1 Single room with two switched light groups

The presence detector gesis KNX P CO serves as standalone master. The master switches two light groups. Additionally, the light can be controlled manually via pushbuttons. For light control, gesis RM series components are used. The presence output provides the presence information for e.g. controlling air conditioning. Thus heating operations can be performed as efficient as possible.

### 5.1.1 Necessary equipment

Name	Type	Order no.
Presence detector	gesis KNX P CO	83.020.1400.0
Sensor interface	gesis KNX TA 2/2	83.020.1404.0
<b>gesis RM series – devices for decentralized installation</b>		
Power supply	gesis EIB RM-PS	83.020.0421.0
Base module	gesis EIB RM-BAS	83.020.0400.3
Output module	gesis EIB RM-0/4	83.020.0403.0

### 5.1.2 Realization



### 5.1.3 Important parameter settings

Parameters not mentioned here maintain their default or customized settings.

## Parameters gesis KNX P CO

Parameter side	Parameter	Setting
General declarations	Operation mode	Master stand-alone
	Outputs light	Outputs light A,B active
	Output presence	Output presence active
	Output surveillance	Inactive
	Normal or test operation	Normal operation

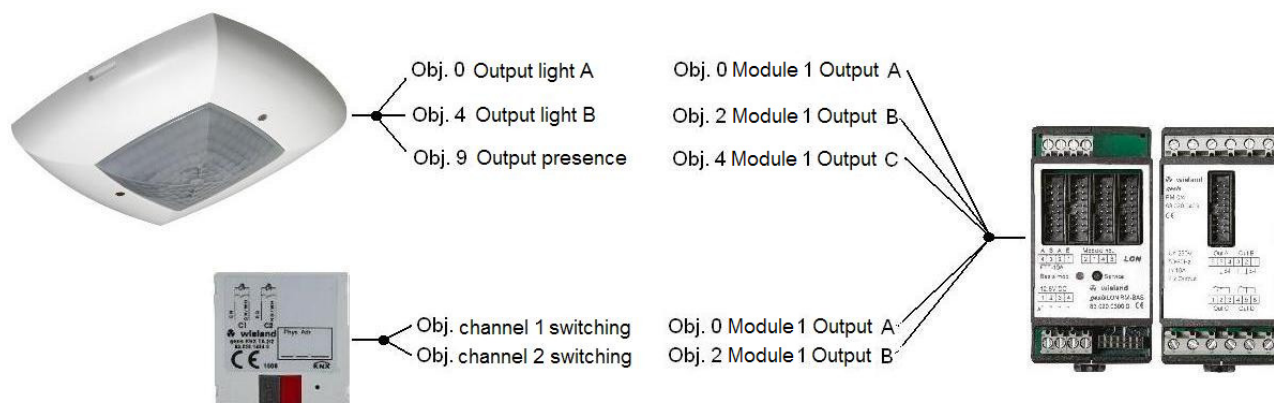
## Parameters gesis KNX TA 2/2

Parameter side	Parameter	Setting
Channel 1	Function	Switch/pushbutton
	Reaction to rising edge	Toggle
	Reaction to falling edge	None
Channel 2	Function	Switch/pushbutton
	Reaction to rising edge	Toggle
	Reaction to falling edge	None

## Parameters gesis EIB RM-BAS

Parameter side	Parameter	Setting
Module selection	Module 1	4 binary outputs
Module 1 output A	Operation mode	Normal
	Relay operation	Normal
Module 1 output B	Operation mode	Normal
	Relay operation	Normal
Module 1 output C	Operation mode	Normal
	Relay operation	Normal

### 5.1.4 Assignment of objects





Notes

Notes section with horizontal lines for writing.









**wieland**

Wieland Electric GmbH  
Brennerstraße 10-14  
D-96052 Bamberg  
Tel. +49 (0) 951 / 9324 -0  
Fax +49 (0) 951 / 9324 -198

Email [info@wieland-electric.com](mailto:info@wieland-electric.com)  
[www.wieland-electric.com](http://www.wieland-electric.com)